

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims, in the application.

Listing of Claims

Claim 1 (canceled)

Claim 2 (currently amended): The carrier handling system of claim 1–5, wherein the identification device is configured for identifying the contents at least as being samples and reagents to be used in the diagnostic process, the identification device being associated with the transporter such that the transporter transports the samples to the first location and the reagents to the second location.

Claim 3 (original): The carrier handling system of claim 2, wherein identification device is configured for identifying the type of the contents independently of information on where in the loading bay the carriers are located.

Claim 4 (original): The carrier handling system of claim 3, wherein the transporter is configured for transporting the carriers from substantially any location in the loading bay to the respective first or second location.

Claim 5 (currently amended): ~~The carrier handling system of claim 1,~~ A carrier handling system for an assay testing diagnostic analyzer, comprising:

a loading bay for receiving and holding the plurality of carriers;
an identification device configured for identifying an identifying feature associated with the carriers to determine the type of contents loaded on each carrier; and

a transporter configured for transporting the carriers from the loading bay to a first or second location depending on the determined type of contents on each carrier for performing a diagnostic process using the contents, the transporter having random access to the plurality of carriers in the loading bay, said system further comprising a first carrier support member that comprises the first location and which is disposed for access by a diagnostic module that is configured for performing the diagnostic process, wherein the transport is configured for transporting the carriers from the loading bay to the first carrier support.

Claim 6 (original): The carrier handling system of claim 5, wherein the transporter is configured for transporting the carrier from the first location to another location on the first carrier support.

Claim 7 (original): The carrier handling system of claim 6, wherein the first location comprises a plurality of first locations on the first carrier support, such that a plurality of carriers can be disposed on the carrier support at the same time.

Claim 8 (original): The carrier handling system of claim 5, wherein the first carrier support comprises a positioner configured to receive and move the carrier such that the diagnostic module can test contents in the carrier.

Claim 9 (currently amended): The carrier handling system of claim 1–5 wherein the identifying feature comprises an optically readable feature, and the identification device comprises an optical reader capable of reading the optically readable feature.

Claim 10 (currently amended): The carrier handling system of claim 1–5, wherein the identifying feature comprises a physical characteristic of the carriers.

Claim 11 (currently amended): A diagnostic system, comprising:

the carrier handling system of claim 4–5;
a diagnostic module configured for conducting the diagnostic operation.

Claim 12 (currently amended): The carrier handling device of claim 4–5, further comprising a programmable computer for controlling the movement of the transporter based on input data and a preprogrammed priority order for processing a plurality of samples.

Claim 13 (currently amended): The carrier handling device of claim 4–5, further comprising the carriers, wherein at least some of the carriers are configured for holding containers that contain reagents, the carriers or containers having the identifying feature for identifying the contents as being reagents.

Claim 14 (canceled)

Claim 15 (canceled)

Claim 16 (canceled)

Claim 17 (canceled)

Claim 18 (canceled)

Claim 19 (canceled)

Claim 20 (canceled)

Claim 21 (canceled)

Claim 22 (canceled)

Claim 23 (canceled)

Claim 24 (canceled)

Claim 25 (canceled)

Claim 26 (currently amended): The diagnostic system of claim 25 30, wherein the positioning device is driven to position the carriers for access by the diagnostic module.

Claim 27 (original): The diagnostic system of claim 26, wherein the positioning device comprises a rotating carousel.

Claim 28 (currently amended): The diagnostic system of claim 25 30, further comprising the diagnostic module, which is configured for performing the diagnostic process by accessing and combining the substances from one of the containers and also another substance to perform the diagnostic process.

Claim 29 (original): The diagnostic system of claim 28, wherein the substance in the container comprises a reagent, and the other substance comprises a sample.

Claim 30 (currently amended): ~~The diagnostic system of claim 25, An assay testing diagnostic analyzer system, comprising:~~

~~a loading bay for loading a plurality of carriers that are configured for holding containers that contain fluid substances for use in a diagnostic process;~~

~~a positioning device configured for receiving and positioning the carriers for access by a diagnostic module to perform the diagnostic process;~~

~~a transporter configured for transporting the carriers from the loading bay to the positioning device;~~

~~a retention member associated with the positioning device and configured for locking the carriers to the positioning device, the retention member being operatively associated with the transporter for releasing the~~

carriers therefrom to enable the transporter to transport the carrier from the positioning device, further comprising an activation member operably associated with the transporter for releasing at least one of the carriers when the transporter is in contact with the activation member.

Claim 31 (currently amended): The diagnostic system of claim 30, further comprising a carrier locking member configured for moving with respect to the carousel positioning device in association with the carrier for locking and unlocking the carrier with respect to the positioner positioning device, the activation member being configured for being displaced by the transporter to move the locking member for the locking and unlocking of the carrier.

Claim 32 (currently amended): The diagnostic system of claim 25 30, wherein the retention member comprises first latching member configured for lockingly latching to a second latching member of at least one of the carriers for locking the carrier to the positioner positioning device, the retention member being configured for relatively moving the latching members for locking and unlocking the carrier.

Claim 33 (currently amended): The diagnostic system of claim 32, further comprising a locking member movable with respect to the positioner positioning device and associated with the carrier for moving the second latching member with respect to the first latching member for locking and unlocking the carrier.

Claim 34 (original): The diagnostic system of claim 33, further comprising an activation member operatively associated with the transporter for releasing the carrier when the transporter is in contact with the activation member, the locking member comprising a tab that is received in a recess of the carrier and which is configured for sliding the carrier with respect to the latching member.

Claim 35 (currently amended): The diagnostic system of claim
25 30, further comprising:

the plurality of carriers;
a plurality of the retention members;
a carrier sensor configured for detecting the presence of the
carriers on the positioner positioning device.

Claim 36 (currently amended): The diagnostic system of claim
35, wherein the carriers have an identifying feature, the diagnostic system
further comprising:

an identification device configured for identifying the identifying
feature of the carriers; and

a programmable computer for controlling the movement of the
transporter and the positioner positioning device based on input data and a
preprogrammed priority order for processing a the contents of the carriers
based on the identified identifying feature.

Cancel claims 1, 14-24, and 25.